Evaluation of New Orthoptic Stroke Service at Southport and Ormskirk Hospitals

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Background

Research suggests that the prevalence of visual problems post stroke, is approximately 70%.[1] Therefore, it is recommended that patients have either visual screening, or formal Orthoptic assessment, so that "***Crucial information can thus be provided on visual status and its functional significance to the stroke team, patients and carers, enabling early intervention.***"

Historically at Southport and Ormskirk Hospitals, stroke patients were referred to Ophthalmology to be seen on the acute referral clinic and the emergency Orthoptic clinic as required. Occasionally patients were seen on the ward by the Orthoptist, but this was ad-hoc and reliant on clinical pressures.

In September 2022, a Hyper-Acute Stroke Unit (HASU) opened at Aintree Hospital, which enabled secured funding for an Orthoptist led stroke service at Southport and Ormskirk Hospitals.

In recent years there have been significant strides in the national stroke guidance, that specifically highlights the importance of vision assessment. Both the Royal College of Physicians and NICE updated their guidance in 2023 to recommend patients should either be "screened using a standardised approach"[2] or offered "a specialist orthoptist assessment as soon as possible"[3]. 6 months ago, SSNAP (Sentinel Stroke National Audit Programme) data was updated to include vision screening and Orthoptic assessment, formalising the requirement of vision assessment.

Aims

1. Compare the new service (starting in 2023), with that of the previous ad-hoc service (2021/22), to establish its effectiveness.
2. Evaluate if the service is adhering to the current professional body guidance in relation to staffing and key elements required.
3. Analyse the number of referrals and geographically where patients are located, to evaluate if the current outpatient service is fit for purpose.

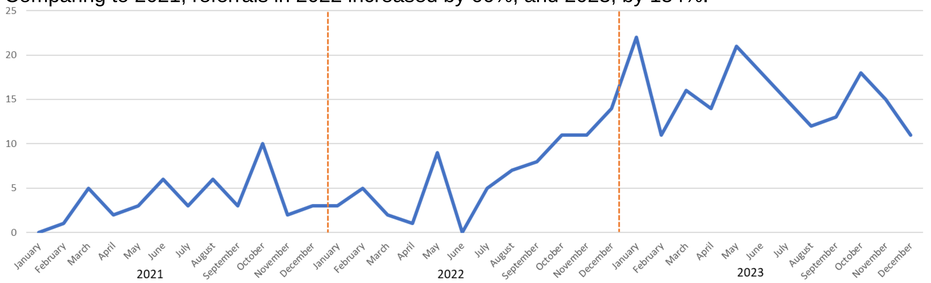
Methodology

- Both services were compared by number of referrals and patient wait.
- The number of referrals were analysed, checking for correlation with the known prevalence of visual issues post stroke, from the available evidence.
- The service was compared against the British and Irish Orthoptic Society (BIOS) Guidelines.
- Information on referrer, and location of patients was also reviewed.

Results

Number of Referrals

Number of referrals increased significantly once the new service started, a trend which started late 2022, as preparations (training ward staff, formalising referral process, etc) were beginning. Comparing to 2021, referrals in 2022 increased by 66%, and 2023, by 154%.



Number of patient entries on SSNAP was compared to the number of referrals received, giving a reasonable indication of what percentage of stroke patients have experience visual issues. This can then be compared to the literature looking at prevalence of visual problems post stroke.

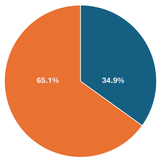
The 2023 data does correlate with the available evidence. Implying the service is capturing the appropriate patients.

Study	Prevalence of visual problems following stroke
Rowe et al, (2019)[1]	73%
Hepworth et al, (2016)[4]	65% (range 19-92%)
Rowe et al, (2013)[5]	85%
Ijaola et al, (2009)[6]	92%

Data period	SSNAP data (number of records completed)	Number of referrals received	Percentage referred
2022			
Apr-Jun	99	10	15.1%
Jul-Sep	91	20	31.3%
Oct-Dec	83	36	59.0%
2023			
Apr-Jun	66	52	78.8%
Jul-Sep	64	38	59.4%
Oct-Dec	61	43	70.5%

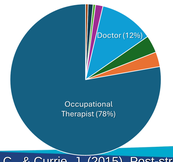
Geographical Location of clinics and patients

65% of patients were found to live closest to Southport Hospital, and 35% lived closest to Ormskirk Hospital. Giving almost a ratio of 1:2. This is the same ratio as the frequency of outpatient clinics currently.



Referrer Role

Unsurprisingly, majority of the referrals come from the Occupational Therapists, accounting for 78% of referrals. The next highest referrer group were Doctors (12%) followed by Occupational Therapists from the HASU (4%) and Physiotherapists (3%).



BIOS Service Standards

The service was reviewed against BIOS' statement for vision services in stroke practice specifically looking at the "key elements for high quality stroke/vision services".

BIOS Standard	Old Service	New Service
Minimum designated orthoptic sessions per week (BIOS 2014 recommendations)	✗	✗
Flexible appointments	✗	✓
Formal stroke team training	⚠	✓
Formal support from stroke physicians	✗	✓
Lay summaries	✗	✓
Open communication	✓	✓
Orthoptic assessment within one week of stroke onset	⚠	✓
Orthoptist named on core stroke team	✗	✓
Provision of visual information leaflets	✓	✓
Rota of orthoptic staff	⚠	✗
Standardised referral form	✓	✓
Vision care pathway	✗	✓

✓ Yes
✗ No
⚠ Ad-Hoc

Conclusions

- Our current Orthoptic stroke service **meets 10 out of the 12 factors recommended by BIOS** for a "high quality service".
- The **quantity of referrals to Orthoptics has increased significantly**, starting around Sept 2022 when the HASU opened, and preparations for the service began. **(2021 to 2022 = 66% increase, 2022 to 2023 = 154% increase)**
- Unfortunately, **this has caused longer waits overall, but ward patients are seen within a week.** The overall wait encompasses all waits, for ward, Orthoptist, Ophthalmology and visual fields. For outpatients, this means they are triaged to dedicated clinics and have a pathway that specifically caters for the clinical conditions most frequently seen, with options for appointments that may be more suited to those with a poorer recovery post-stroke.
- Following the increase over the past few years, the rate of referrals now appears to **steadily sit around the expected number of patients** with visual problems following a stroke, **as per the available evidence**. This suggests that patients with visual symptoms are being identified and referred correctly.
- Current frequency and geographical spread of clinics corresponds with the caseload.
- The **most frequent referrers are the Occupational Therapists, accounting for 78% of referrals in 2023**. The OT team on the stroke ward already have dedicated teaching sessions and typically work closer with the Orthoptist than any other part of the stroke MDT.

References:
1. Rowe, Fiona J et al.(2019) "High incidence and prevalence of visual problems after acute stroke: An epidemiology study with implications for service delivery." *PloS one* vol. 14,3
2. National Clinical Guideline for Stroke, for the UK and Ireland (2023) Royal college of Physicians
3. Stroke Rehabilitation in Adults (2023) NICE guideline NG236
4. R. Hepworth, L., J. Rowe, F., F. Walker, M., Rockliffe, J., Noonan, C., Howard, C., & Currie, J. (2015). Post-stroke Visual Impairment: A Systematic Literature Review of Types and Recovery of Visual Conditions. *Ophthalmology Research: An International Journal*, 5(1), 1–44
5. Rowe, F., & VIS Group UK (2013). Symptoms of stroke-related visual impairment. *Strabismus*, *21*(2), 150–154.
6. Ijaola, F. O., & Kausar, S. A. (2009). Visual impairment following stroke: do stroke patients require vision assessment?. *Age and ageing*, *38*(5), 629–631.
7. Position Statement for Vision Services in Stroke Practice (2021) British and Irish Orthoptic Society